

What is claimed is:

1. A method for recovering an application from a runtime fault, the method comprising steps of:
 - receiving an exception caused due to a runtime fault in a thread;
 - dispatching the exception to an exception handler;
 - trapping the exception before the exception reaches the exception handler when the exception handler is a top level exception handler which terminates the application; and
 - continuing execution of the application.
2. The method recited in claim 1 further comprising a step of terminating the thread that caused the exception.
3. The method recited in claim 1, wherein the dispatching step comprises steps of:
 - determining a corresponding exception handler to which the exception is to be dispatched;
 - dispatching the exception to the corresponding exception handler when the corresponding exception handler exists; and
 - dispatching the exception to a top level dispatcher is the corresponding exception handler when no corresponding exception handler exists.
4. The method recited in claim 1 further comprising a step of despatching the trapped exception to a trapped exception handler.
5. The method recited in claim 4 further comprising a step of terminating the thread when the trapped exception handler is not capable of resolving the trapped exception.
6. The method recited in claim 5, wherein the continuing step allows continuing execution of the application after the thread is terminated.

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7. The method recited in claim 1 further comprising steps of:
translating the trapped exception into an exception which is able to be resolved by a lower level exception handler, and
determining if there is a lower level exception handler which is capable of resolving the translated exception.
8. The method recited in claim 7 further comprising a step of terminating the thread that caused the exception when there is no lower level exception which is capable of resolving the translated exception.
9. The method recited in claim 2 further comprising a step of logging state information representing the state that the application was in before occurrence of the exception caused the termination of the thread.
10. The method recited in claim 9 further comprising a step of forwarding the logged information to a remote database over a computer network.
11. The method recited in claim 10 further comprising steps of:
receiving a recommendation from the remote database; and
informing the recommendation to the user.
12. The method recited in claim 9 further comprising a step of forwarding a bug report to a bug report centre over a computer network.
13. A method for recovering an application from a runtime fault in a thread, the application being executed under an operating system having one or more low level exception handlers and a top level exception handler, the method comprising steps of:
trapping an exception which is despatched to the top level exception handler before the exception reaches the top level exception handler, a default action of which is to terminate the application upon receipt of exceptions; and

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continuing execution of the application.

14. The method recited in claim 13 further comprising steps of:
translating the trapped exception into an exception which is able to be resolved by a lower level exception handler, and
determining if there is a lower level exception handler which is capable of resolving the translated exception.
15. The method recited in claim 14 further comprising a step of terminating the thread that caused the exception when there is no lower level exception which is capable of resolving the translated exception.
16. The method recited in claim 13 further comprising a step of terminating the thread that caused the exception.
17. The method recited in claim 16 further comprising a step of logging state information representing the state that the application was in before occurrence of the exception caused the termination of the thread.
18. The method recited in claim 17 further comprising a step of forwarding the logged information to a remote database over a computer network.
19. The method recited in claim 18 further comprising steps of:
receiving a recommendation from the remote database; and
informing the recommendation to the user.
20. The method recited in claim 17 further comprising a step of forwarding a bug report to a bug report centre over a computer network.
21. An application recovery system for recovering an application from a runtime fault, the application recovery system comprising:
an exception dispatcher for receiving an exception caused due to a runtime fault in a thread and dispatching the exception to an exception handler;

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an exception trapper for trapping the exception before the exception causes termination of the application; and

an executor for continuing execution of the application.

22. The application recovery system as claimed in claim 21, wherein the exception trapper has a thread terminator for terminating the thread that caused the exception.

23. The application recover system as claimed in claim 21, wherein the exception trapper is provided in place of a top level exception handler which terminates the application.

24. An application recovery system for recovering an application from a runtime fault caused in a thread, the application running under an operating system having an exception dispatcher, one or more low level exception handlers and a top level exception handler which terminates the application, the application recovery system comprising:

an exception trapper placed between the exception dispatcher and the top level exception handler for trapping an exception before the exception reaches the top level exception handler; and

a trapped exception handler for handling the trapped exception.

25. The application recovery system recited in claim 24, wherein the trapped exception handler comprises a thread terminator for terminating the thread when there is no lower level exception handler that is capable of handling the translated exception.

26. The application recovery system recited in claim 24, wherein the trapped exception handler comprises:

an exception translator for translating the trapped exception to a translated exception; and

an exception handler selector for determining if a lower level exception handler is capable of resolving the translated exception.

27. The application recovery system recited in claim 26, wherein the trapped exception handler further comprises a thread terminator for terminating the thread when there is no lower level exception handler that is capable of handling the translated exception.

28. The application recovery system recited in claim 27, wherein the trapped exception handler further comprises a state restorer for restoring the state that the application was in before the fault occurred to continue the execution of the application.

29. The application recovery system recited in claim 24 further comprising a state information logger for logging information of the state that the application was in before the fault occurred.

30. The application recovery system recited in claim 29 further comprising a query generator for generating a query including the state information to query a recommendation from a remote database over a computer network.

31. The application recovery system as claimed in claim 30 further comprising a user advisor for receiving a recommendation from the remote database and informing the user of the recommendation.

32. The application recovery system as claimed in claim 30 wherein the query generator has a bug report generator for forwarding a bug report with the state information to a bug report centre.

33. A computer readable memory element storing the instructions or statements for use in the execution in a computer of a method for recovering an application from a runtime fault, the method comprising steps of:

trapping the exception before the exception reaches the exception handler when the exception handler is a top level exception handler which terminates the application; and

continuing execution of the application.

34. Electronic signals for use in the execution in a computer of a method for recovering an application from a runtime fault, the method comprising steps of:
- receiving an exception caused due to a runtime fault in a thread;
 - dispatching the exception to an exception handler;
 - trapping the exception before the exception reaches the exception handler
- when the exception handler is a top level exception handler which terminates the application; and
- continuing execution of the application.